

METHOD OF PROCESSING A MULTIPLE ALLOY ROTOR

Abstract

A method of processing a rotor. The rotor is formed by casting an ingot to have first and second regions formed of different alloys that intermix during casting to define a transition zone therebetween. The ingot is forged to yield a rotor forging that contains axially-aligned first and second alloy regions and a transition zone therebetween. A three-dimensional approximation of the transition zone is generated, which can be used to predict the effects of the transition zone on the dynamic performance of a rotor machined from the forging.